

## G-229

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Customer: GTE Laboratories;  
Theresa Graziani

Payload Mgr: Alfred Bellows

NASA Tech Mgr: David W. Peters

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This experiment was designed to grow crystals of gallium arsenide (GaAs). The crystal grown on this mission was to reach 1 inch in diameter by 3.5 inches long by using a gradient freeze growth technique.

The payload was entirely self-sufficient and included its own power system, growth system and control and data acquisition systems. The crystal growth was set to last nearly 11 hours and would be initiated by an astronaut closing a switch. This was the only human interaction necessary with this payload.

This experiment was a reflight of a successful GAS experiment conducted on STS-40 in June 1991, but with additional features included to enhance the ability to analyze convection effects on crystal growth in microgravity. The experiment was part of a comprehensive program that involved a comparative study of crystal growth under a variety of terrestrial conditions in addition to crystal growth in microgravity aboard the Space Shuttle. Scientists from each research institution contributed to characterization of the space-grown crystals.



*Al Bellows performed the final inspection of the experiment.*